

# BRADLEY ENGINEERING

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## Data & Power Transmission



Several methods of data transmission are available from Bradley Engineering. They fall into 3 basic categories;

### Multicore - via XLR4

All our equipment is supplied as standard with a 4 pin output or input plug. Where space permits this is an XLR4. Where there is no space for an XLR4 we will use either a 4pin Hirose or a Fischer 102 series DBEE. In general the Fischer socket is used for IP67 integrity.

All 4 pins are used to transmit both power and data down the same 4 core cable. The cable length can be up to about 1km but the input voltage to the system may have to be raised to near 30v (max.) or local power can be used at the remote end.

### Modulated Video Circuit

Power and data can also be routed via a 75 ohm video circuit. If using a normal BNC type cable, both power and video can be routed through this cable. However data only (without power) can also be routed through a multiplexed video circuit. One example of this use is when using a remote camera on a TRIAX circuit. The return viewfinder video circuit (not needed when there is no cameraman) can carry the modulated data. Data is ASK modulated onto a 100kHz carrier.

### Radio Data Transmission

Data can also be sent via a radio data transmitter. It is not advisable to use a standard 'Modem' type data transmitter and receiver unless it can be switched to streaming mode. This is because head control data is real time data and any errors will be corrected by the modem before more data is sent. This will cause delays of up to several seconds and will eventually overrun the modem buffers.

Bradley Engineering manufactures suitable data transmitters and receivers. All the code balancing and error correction is taken care of within the transmitters and receivers. They are generally set up to operate on the license free band and offer 32 selectable channels. They are powerful units (500mW) and can be used for 3rd party data as well. The receivers can also provide camera power and control data. This may be required if you are not using a Bradley Engineering Pan & Tilt head.